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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LUKS, JEREMY AUSTIN

ART UNIT

PAPER NUMBER

2832

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,563	Applicant(s) HOTTA ET AL.	
	Examiner JEREMY LUKS	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
4a) Of the above claim(s) 3-6 and 15-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7-14,18 and 19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/20/09 has been entered.

Claim Objections

2. Claim 19 is objected to because of the following informalities: In line 6 of the claim, the word "a" should be changed to "an". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 8, 9, 13, 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun (2004/0144367) in view of Goplen (4,872,528).

With respect to Claim 1, Braun teaches a delivery pipe (Figure 10) comprising: an outer pipe (134) having a longitudinal direction; an inner pipe (110) extending in the longitudinal direction and fluidly isolated from the outer pipe (134); wherein the outer pipe (134) is connected to a plurality of fuel injectors (136a-d) of a multi-cylinder internal combustion engine (Page 2, [0027]), the outer pipe (134) being provided with a connector for causing fuel to flow to a fuel passage defined between the outer pipe (134) and the inner pipe (110) (Page 2, Lines 9-10 of [0027]), the inner pipe (110) being disposed in the outer pipe (134) and having an open end (117) through which an interior of the inner pipe (110) communicates with atmosphere (Page 2, [0024]-[0025]). Braun fails to teach a noise emission decreasing device located within the inner pipe, and the noise emission decreasing device made separately from the inner pipe and fixed to the open end of the inner pipe so as to act being adapted to act so as to decrease a noise emitted from the inner pipe. Goplen teaches wherein it is known to provide a noise emission decreasing device (Figures 1-4, #4, 14) located within a pipe (#3, 12, will be inner pipe when used in combination), and the noise emission decreasing device (4, 14) being made separately from the pipe (#3, 12, will be inner pipe when used in combination) and fixed to the open end (as seen in Figure 4) of the inner pipe (3, 12) so as to act to decrease a noise emitted from the pipe (#3, 12, will be inner pipe when used in combination) (Col. 1, Lines 36-40). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Braun, with the apparatus of Goplen to provide a substantial reduction in sound level without increasing overall size and weight of the dampening device of Braun.

With respect to Claim 2, Goplen teaches wherein the noise emission decreasing device (Figures 1-4, #4, 14) includes a mesh (Col. 2, Lines 23-29).

With respect to Claim 8, Goplen teaches wherein the noise emission decreasing device (Figures 1-4, #4, 14) is provided at only a portion of a cross section of an interior of the pipe (#3, 12, will be inner pipe when used in combination) (Col. 1, Lines 36-40).

With respect to Claim 9, Goplen teaches wherein the noise emission decreasing device (Figures 1-4, #4, 14) is disposed at an entire circumference of an inside surface of the pipe (#3, 12, will be inner pipe when used in combination). This is best seen in Figure 2 at locations where device (4) is in contact with inner surface of pipe (3) out the circumference.

With respect to Claim 13, Goplen teaches wherein the noise emission decreasing device (Figures 1-4, #4, 14) is pressed into the pipe (#3, 12, will be inner pipe when used in combination with Braun) and is located inside the pipe (#3, 12, will be inner pipe when used in combination with Braun) (Col. 2, Lines 36-43). Further, with respect to pressing the material inside the inner pipe, the method of forming a device is not germane to the issue of patentability of the device itself. Therefore, this limitation has been given little patentable weight.

With respect to Claim 14, Goplen teaches wherein the noise emission decreasing device (Figures 1-4, #4, 14) is bonded to an inner surface of the pipe (#3, 12, will be inner pipe when used in combination with Braun) and is located inside the pipe (#3, 12, will be inner pipe when used in combination with Braun) (Col. 2, Lines 36-43). The Examiner considers the disclosure of "other means" to encompass bonding, which is a

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well known method of attachment. Further, the method of forming a device is not germane to the issue of patentability of the device itself. Therefore, this limitation has been given little patentable weight.

With respect to Claim 18, Braun teaches a delivery pipe (Figure 10) comprising: an outer pipe (134) having a longitudinal direction; an inner pipe (110) extending in the longitudinal direction and fluidly isolated from the outer pipe (134); wherein the outer pipe (134) is connected to a plurality of fuel injectors (136a-d) of a multi-cylinder internal combustion engine (Page 2, [0027]), the outer pipe (134) being provided with a connector for causing fuel to flow to a fuel passage defined between the outer pipe (134) and the inner pipe (110) (Page 2, Lines 9-10 of [0027]), the inner pipe (110) being disposed in the outer pipe (134) and having an open end (117) through which an interior of the inner pipe (110) communicates with atmosphere (Page 2, [0024]-[0025]). Braun fails to teach a noise emission decreasing device including a mesh located within the inner pipe only at a portion of a cross-section of an interior thereof, and the noise emission decreasing device made separately from the inner pipe and fixed to the open end of the inner pipe so as to act being adapted to act so as to decrease a noise emitted from the inner pipe. Goplen teaches wherein it is known to provide a noise emission decreasing device (Figures 1-4, #4, 14) including a mesh (Col. 2, Lines 23-29), and located within a pipe (#3, 12, will be inner pipe when used in combination) provided at only a portion of a cross section of an interior of the pipe (#3, 12, will be inner pipe when used in combination), and the noise emission decreasing device (4, 14) being made separately from the pipe (#3, 12, will be inner pipe when used in combination)

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and fixed to the open end (as seen in Figure 4) of the inner pipe (3, 12) so as to act to decrease a noise emitted from the pipe (#3, 12, will be inner pipe when used in combination) (Col. 1, Lines 36-40). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Braun, with the apparatus of Goplen to provide a substantial reduction in sound level without increasing overall size and weight of the dampening device of Braun.

4. Claims 7, 10-12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun (2004/0144367) in view of Goplen (4,872,528), as applied to claim 1 above, and further in view of Langer (5,452,577).

With respect to Claim 7 and 10-12, Braun and Goplen are relied upon for the reasons and disclosures set forth above. Goplen teaches wherein it is known to provide a noise emission decreasing device (Figures 1-4, #4, 14) located within a pipe (#3, 12, will be inner pipe when used in combination), and the noise emission decreasing device (4, 14) being made separately from the pipe (#3, 12, will be inner pipe when used in combination) and fixed to the open end (as seen in Figure 4) of the inner pipe (3, 12) so as to act to decrease a noise emitted from the pipe (#3, 12, will be inner pipe when used in combination) (Col. 1, Lines 36-40). Braun and Goplen fail to explicitly teach wherein the noise emission decreasing device is provided at all portions of a cross section of an interior of the inner pipe; wherein the noise emission decreasing device is disposed at only a portion of a circumference of an inside surface of the inner pipe; wherein the noise emission decreasing device is disposed at only the open end of the inner pipe; and wherein the noise emission decreasing device is disposed at only a longitudinally

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intermediate portion of the inner pipe. Langer teaches wherein it is known to provide sound absorbing material at either all or only portions of an inner pipe (Col 1, Lines 44-64) to achieve a desired reduction of noise in a conduit. Therefor when used in combination Langer teaches wherein it would have been an obvious matter of design choice to provide the noise emission decreasing device at all portions of a cross section of an interior of the inner pipe; at only a portion of a circumference of an inside surface of the inner pipe; at only the open end of the inner pipe; and at only a longitudinally intermediate portion of the inner pipe. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Braun as modified, with the apparatus of Langer to apply the silencing layer to locations which are particularly critical with respect to vibration so that an optimum system can be achieved with respect to noise emission.

With respect to Claim 19, Braun teaches a delivery pipe (Figure 10) comprising: an outer pipe (134) having a longitudinal direction; an inner pipe (110) extending in the longitudinal direction and fluidly isolated from the outer pipe (134); wherein the outer pipe (134) is connected to a plurality of fuel injectors (136a-d) of a multi-cylinder internal combustion engine (Page 2, [0027]), the outer pipe (134) being provided with a connector for causing fuel to flow to a fuel passage defined between the outer pipe (134) and the inner pipe (110) (Page 2, Lines 9-10 of [0027]), the inner pipe (110) being disposed in the outer pipe (134) and having an open end (117) through which an interior of the inner pipe (110) communicates with atmosphere (Page 2, [0024]-[0025]). Braun fails to teach a noise emission decreasing device including a mesh located within the

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inner pipe at only an open end, and the noise emission decreasing device made separately from the inner pipe and fixed to the open end of the inner pipe so as to act being adapted to act so as to decrease a noise emitted from the inner pipe. Goplen teaches wherein it is known to provide a noise emission decreasing device (Figures 1-4, #4, 14) including a mesh (Col. 2, Lines 23-29), and located within a pipe (#3, 12, will be inner pipe when used in combination), and the noise emission decreasing device (4, 14) being made separately from the pipe (#3, 12, will be inner pipe when used in combination) and fixed to the open end (as seen in Figure 4) of the inner pipe (3, 12) so as to act to decrease a noise emitted from the pipe (#3, 12, will be inner pipe when used in combination) (Col. 1, Lines 36-40). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Braun, with the apparatus of Goplen to provide a substantial reduction in sound level without increasing overall size and weight of the dampening device of Braun. Langer teaches wherein it is known to provide sound absorbing material at either all or only portions of an inner pipe (Col 1, Lines 44-64) to achieve a desired reduction of noise in a conduit. Therefor when used in combination Langer teaches wherein it would have been an obvious matter of design choice to provide the noise emission decreasing device at only the open end of the inner pipe. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Braun as modified, with the apparatus of Langer to apply the silencing layer to locations which are particularly critical with respect to vibration so that an optimum system can be achieved with respect to noise emission.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 2, 7-14, 18 and 19 have been considered but are moot in view of the new ground(s) of rejection. The Examiner considers the obvious combination of Braun, Goplen and Langer to teach all of the limitations as claimed by Applicant.

6. In response to applicant's argument that Braun cannot be combined with Adler or another reference to provide a noise decreasing device, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, Braun's interior pipe is provided to aid in reducing pressure pulses, which have an inherent sound or noise component. Goplen provides a device to significantly reduce sound in an open pipe by providing a mesh screen within the pipe that will not increase the overall size or weight of the device. The combination provides an improvement with respect to sound/noise attenuation.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pertinent arts of record relating to delivery pipes are disclosed in the PTO-892.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Luks whose telephone number is (571) 272-2707. The examiner can normally be reached on Monday-Friday, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeremy Luks/
Examiner, Art Unit 2832

/Jeffrey Donels/

Primary Examiner, Art Unit 2832